**WT Docket number 02-46**

# Comment from CML Emergency Services, Inc.

As requested by the Wireless Telecommunications Bureau on October 16, 2002, CML Emergency Services (CML) is respectfully submitting this comment to the *Report on Technical and Operational Wireless E911 Issues* (WT Docket No. 02-46), prepared for the Federal Communications Commission by Dale N. Hatfield.

CML is a leading provider of 911 network and Customer Premise Equipment (CPE). Founded in 1979, our products are used in more than 950 sites throughout the U.S., as well as in Canada and Europe.

CML commends Mr. Hatfield for the quality and comprehensiveness of his report. We believe he has identified many of the key issues that must be addressed to overcome obstacles and accelerate deployment of enhanced 911 (E911) services. Our comment will focus on the following issues identified in his report:

1. Wireless 911 implementation
2. Network evolution
3. PSAP readiness
4. Development of technical standards

## 1. Wireless E911 implementation

In his report, Mr. Hatfield observes "that the deployment of wireless E911 services in the United States is an extremely complex matter." As both a network and CPE vendor, CML is acutely aware of these complexities, and has developed solutions to meet the needs of public safety providers in this environment.

Figure 1 represents the typical interconnect between wireless carriers and Public Safety Answering Points (PSAPs). As Mr. Hatfield notes, the legacy network, although extremely reliable, is not optimized for wireless E911 calls and associated data. In addition to technology issues, CML believes disputes over tariffs and confidential customer records have slowed the deployment of wireless E911.

**FIGURE 1: Typical network configuration for Wireless E911**
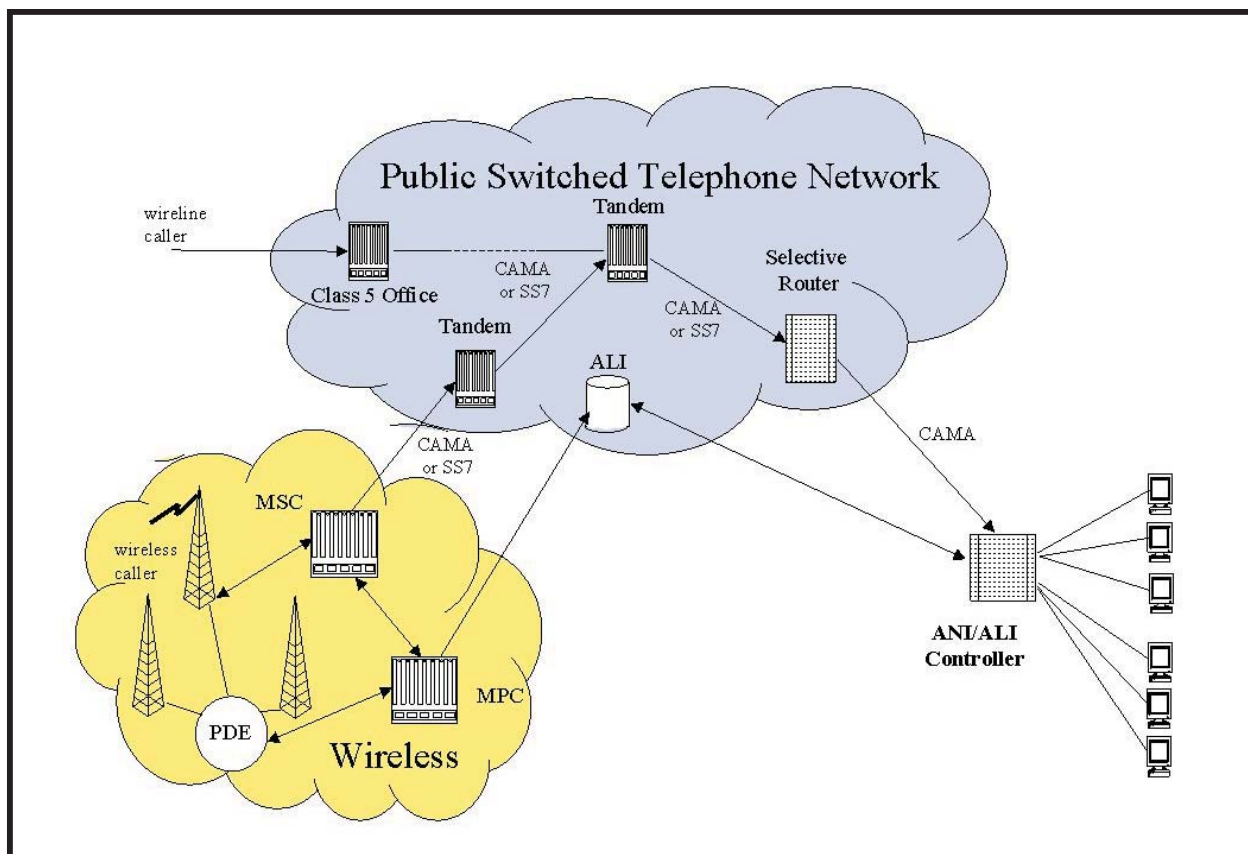
At our public safety customers' requests, CML has successfully deployed direct connections between wireless carriers and public safety agencies. This configuration avoids the technical and jurisdictional issues noted above. Figure 2 illustrates a typical configuration using a wireless direct configuration.

**FIGURE 2: "Wireless Direct" configuration for Wireless E911**
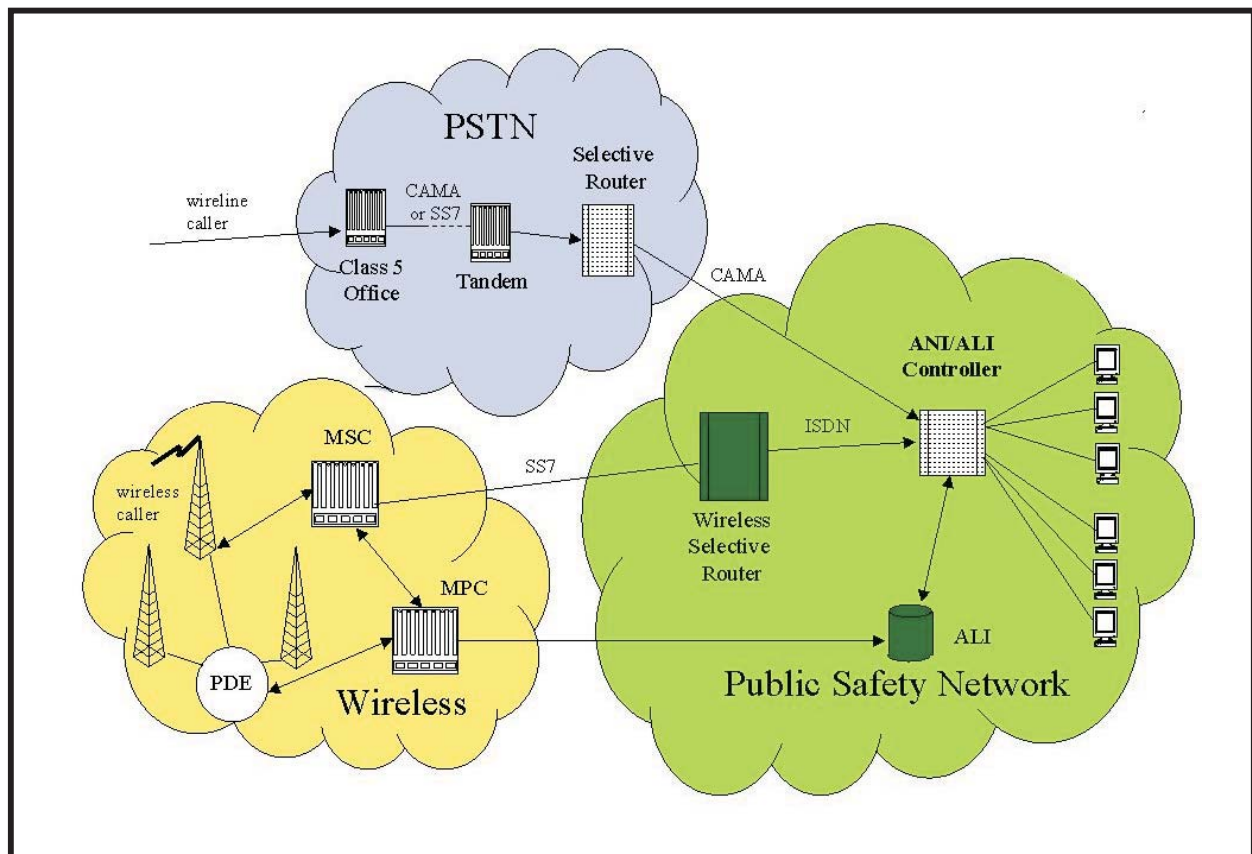
Further advantages of the wireless direct configuration are:

- Improves 911 service through dramatically faster call setup times
- Reduces operational costs for PSAPs
- Enables PSAP supervisors to monitor and optimize the network in real time
- Facilitates wide-scale deployment of technologies such as SS7

CML also believes that network evolution does not have to come at the expense of reliability. Our products have consistently demonstrated carrier grade performance, and are deployed today in both Incumbent Local Exchange Carrier (ILEC) and private networks across the U.S. CML equipment is also fully wireless phase I and II compliant and supports:

- Call Associated Signaling (CAS)
- Non-call Associated Signaling (NCAS)
- Hybrid CAS/NCAS

The first two sites in the United States to deploy live Phase II- compliant wireless E911 – St. Clair County Emergency Telephone System (IL), and the State of Rhode Island E911 Emergency Telephone System – both use CML's equipment. Other CML customers have or soon will become Phase II operational. In addition, the Mid-America Regional Council, a consortium of more than 40 PSAPs in and around Kansas City, has adopted the "wireless direct" approach described above to deploy Phase II wireless services.

In summary, the FCC's mandate for wireless E911 services can, and is, being overlaid on the existing network infrastructure. CML is proud and very pleased to be a part of this solution. However, we also believe that many more valuable and needed services can be provided with a modern network infrastructure, and agree with the NENA observation, noted by Mr. Hatfield in his report, that the 911 system ". . . must be 'reinvented' to accommodate new technologies, increased competition and other institutional changes . . ."

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## 2. Network evolution

In his executive summary and throughout the report, Mr. Hatfield identifies serious limitations with the existing, analog network infrastructure. He notes "It is troubling because it means that the additional network elements and functionalities necessary to handle the increasing volume of wireless E911 calls are being built upon a platform or foundation that has serious limitations in terms of speed, scalability and adaptability. Additionally, it is troubling because these limitations not only burden the development of wireless E911 services, but they also will constrain our ability to extend E911 access to a rapidly growing number of non-traditional devices (e.g., PDAs), systems (e.g., telematics) and networks (e.g., voice networks that employ Voice-over-the-Internet Protocol – VoIP)."

CML agrees with Mr. Hatfield and believes that he has identified a key issue facing the public safety sector today. In presentations to the Association of Public-Safety Communications Officials (APCO) – August 2001, and the National Emergency Number Association (NENA) – June 2002, CML has spoken to the same issue. In addition to the points identified by Mr. Hatfield in his report, a packetized voice network infrastructure for public safety provides real operational benefits. Those we noted in our presentations include:

- Ability to see an entire state's 911 status from a single point
- A state-wide interconnected network carrying voice with a centralized GIS database (with backups and local servers feeding it)
- Audio (including radio) recorded centrally
- One county taking overflow calls for another seamlessly
- Anyone with appropriate authorization being able to log in from a browser and start taking 911 calls from anywhere in the state connected to the public safety network
- Interconnection to major trauma centers to share emergency and incident information before accident victims arrive at emergency center doors

- PSAP supervisor control of network bandwidth
- Transferring calls, data, location, records, recordings, etc., to another PSAP even if it is using different CPE
- Ability to update location information in real time

CML is committed to this vision and to deploying products today that are designed to evolve to meet these needs. We believe that virtually every technology problem has been solved by a free market system and advocate an open, competitive environment in which public safety agencies are equipped and able to control their own destiny.

## 3. PSAP readiness

The accelerating rate of change in technologies, legislation, service providers, and community expectations is creating a confusing environment for public safety agencies. Public safety answering points (PSAPs) across the country are reporting an increase both in the number of incidents and the number of calls received per incident. There's a bewildering array of potential solution providers, with more than 200 vendors in the computer-aided dispatch (CAD) industry alone. The debate about how to best implement wireless E911 continues. Local Exchange Carriers (LECs) are implementing area code overlays requiring 10-digit-capable systems even in sparsely populated areas. The list goes on and on. It's no wonder that Mr. Hatfield identifies "PSAP fatigue" as a barrier to implementing wireless E911.

CML believes that, in this environment, it is vitally important to share information  with the public safety community. Our wireless E911 primer is available from our corporate web site @ www.cmles.com/wireless911primer. CML is a member of NENA and APCO, and a regular presenter at both national and regional tradeshows organized by these associations. CML supports the recommendation of the Hatfield report for the creation of a National E911 Program Office, and commits to cooperating with such an office if called upon to do so.

## 4. Development of technical standards

In his report, Mr. Hatfield recommends the establishment of an advisory committee to conduct, among other things, "an overall review of the standards situation as related to wireless E911 while continuing to encourage industry-based voluntary standards activities." CML supports this recommendation, and believes that all players must be committed to and involved with the development of industry-wide standards. Our own experience in this regard has not always been encouraging.

In 2000, CML introduced an ISDN interface for our ECS-1000 and RescueSTAR controllers. The interface meets the NENA recommended generic standards of E911 ISDN PSAP equipment, approved in May 1999. The benefits of ISDN within the context of public safety were described in article published in the Autumn 2000 issue of *NENA News*.

The failure of other players on the public safety network to adopt these NENA standards hampers the effectiveness and benefits of this technology for PSAPs. The critical nature of the public safety network must transcend narrow self-interests. CML produces and will continue to produce products that comply with public safety standards to maximize the opportunity for end-user selection and interconnect. We are committed to cooperating with the proposed advisory committee in the interests of fostering the further development of industry standards.

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## 5. Summary

CML is a long-standing and respected provider of network and CPE solutions for the public safety community, with a large installed base throughout the U.S. We produce products that enable the public safety community to achieve the FCC's mandate for wireless E911 within the context of the existing network infrastructure. However, CML believes that new technologies and infrastructure, developed within the context of a competitive environment, will enable public safety agencies to better achieve their objectives with respect to providing effective emergency response, improved interoperability, and control over their resources. Further, we are committed to making our knowledge available to the public safety community in the interests of advancing emergency communications services, and to working with groups that establish industry standards.

CML believes that government bodies, professional associations, and industry should work together to create standards, but that it would not be appropriate for such a body to mandate a certain solution. The solution will be most effective and efficient when left to free market competition. In this context, the recommendations made by Mr. Hatfield would provide an appropriate and effective framework to advance the implementation of wireless E911, and CML would be pleased to participate in or support initiatives resulting from the recommendations of his report  if called upon to do so.

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